WHAT IS IRLM?

IRLM (IMS/VS Resource Lock Manager) is an IBM utility that ensures database integrity when concurrent updates are made to the same database. IRLM monitors the usage & status of all databases & jobs under the region. There are two IRLM regions available for ICES - one for system test (IRLM) and another for production (IRLP).

Each ICES job using IMS databases contains two symbolics either in the job or proc pertaining to IRLM. These two symbolics are inserted to the parmlist in the proc when IMS is called. Both are described below.

IRLM   This value is a switch which determines if IRLM is to be used during the execution of the job. To turn IRLM on, set the switch to 'Y'. If you choose not to use IRLM, turn IRLM off by setting the switch to 'N'.

IRLMNM   This value identifies the IRLM name (or region) the job should run under. As stated above, all production jobs should contain a value of IRLP and all system test jobs should contain a value of IRLM. IF IRLM is turned off, it is irrelevant what value is in this field.

Since usage of IRLM incurs overhead, there are two scenarios in which IRLM is turned off.

Scenario #1 -IRLM not necessary
CEPCN50M (GCN050) updates the notice history database - WGDB20P. Since no other batch job uses this database, there is no need to use the IRLM. However, no other job may update the 20 database while this job is running. An attempt to do so would result in a U0047 abend - database contention. This is regardless of whether IRLM=Y or IRLM=N for this second job. Therefore, usage of IRLM=N should be used sparingly and only in cases where it is unforeseeable that concurrent updates would be necessary.

Scenario #2 -IRLM CSA limit not sufficient
This scenario is more an ICES procedural problem than an IRLM limitation. As mentioned above, IRLM incurs overhead by capturing database updates in a storage area (the CSA) until a checkpoint is encountered or the job completes. If a job is not checkpointing and is using IRLM, all updates made by the job would be kept in the CSA. The CSA limit for the IRLP region has been set at 10 meg which should be more than sufficient. Therefore, if a job or series of jobs running concurrently is highly update-intensive, it is possible to exceed this CSA limit if proper checkpointing procedures are not in place. The ultimate solution is to ensure that any update job in ICES contains checkpoint logic & that an appropriate threshold be set in the checkpoint table - TCRT. See the batch procedure '**ICES CHECKPOINT PROCEDURES**'.